ELSEVIER

Volume 432, Numbers 1–2, 30 July 1997

JOURNAL OF
ELECTROANALYTICAL
CHEMISTRY

Contents

The role of surface crystalline heterogeneities in the electrooxidation of carbon monoxide adsorbed on Rh(111) electrodes in sulphuric acid solutions
R. Gómez, J.M. Orts, J.M. Feliu, J. Clavilier and L.H. Klein 1

Electrochemical and peroxidase O_2-mediated oxidation of indole. -3-acetic acid at physiological pH
T. Hu and G. Dryhurst 7

Dielectric friction at the boundary between two dielectric media
H.H. Girault and A.M. Kuznetsov 19

Deviation from the polarization resistance due to non-linearity. I – theoretical formulation
J.-P. Diard, B. Le Gorrec and C. Montella 27

Deviation of the polarization resistance due to non-linearity. II. Application to electrochemical reactions
J.-P. Diard, B. Le Gorrec and C. Montella 41

Deviation of the polarization resistance due to non-linearity. III—Polarization resistance determination from non-linear impedance measurements
J.-P. Diard, B. Le Gorrec and C. Montella 53

Channel electrode voltammetry and reversible electro-dimerisation processes. The reduction of the methyl viologen di-cation in aqueous solution
J.A. Alden, J.A. Cooper, F. Hutchinson, F. Prieto and R.G. Compton 63

Bioelectrochemical responses of the polyaniline horseradish peroxidase electrodes
Y. Yang and S. Mu 71

The numerical evaluation of the distortion of EIS data due to the distribution of parameters
Z. Lukács 79

The ac faradaic impedance of a redox system with Langmuirian adsorption of the reactants
P. Los and E. Laviron 85

Reversible electrocatalytic reaction of sulfur oxoanions and sulfides by one catalyst of water-soluble cobalt porphyrin
S.-M. Chen 101

Potential oscillations during the reduction of $Fe(CN)_6^{3-}$ ions with convection feedback
Z. Li, J. Cai and S. Zhou 111

Simplification of complex EC and ECE type mechanisms when the intermediates take part in fast equilibrium type coupled reactions
P. Simon and G. Farsang 117

Mathematical modelling of the MCFC cathode. On the linear polarisation of the NiO cathode
E. Fontes, C. Lagergren and D. Simonsson 121

Polysulfides in dimethylformamide: Only the radical anions S_3^- and S_4^- are reducible
F. Gaillard, E. Levillain and J.P. Lelieur 129

Catalytic electrodeposition of silver on glassy carbon electrodes modified with films of cobalt phthalocyanine
B. Böttger, U. Schindewolf, J.L. Avila and R. Rodríguez-Amaro 139

Determination of formal potentials and anion radical lifetimes for hexaarylbiimidazole derivatives
E.W. Oliver and D.H. Evans 145

The study of adsorption and reorientation of quinoline at mercury electrodes by measuring differential capacity–potential and differential capacity–time curves
H. Sawamoto 153

Hydrodynamic modulation using vibrating electrodes: Application to electroanalysis
D.E. Williams, K. Ellis, A. Colville, S.J. Dennison, G. Laguillo and J. Larsen 159

Linear analysis of steady-state E_q, E_qC and E_qC' voltammograms
H. Fang and H.-Y. Chen 171

The effect of ferrocyanide on the performance of heptyl viologen. -based electrochromic display devices
P.M.S. Monk 175

Reduction of fluoroalkoxyarenes
C. Combellas, F. Kanoufi and A. Thiébault 181

Electrosorption of D-sorbitol on Pt(110) and Pt(111) . electrodes in acid medium: a study by programmed potential voltammetry
L. Proença, M.I.S. Lopes, I. Fonseca, J.-M. Léger and C. Lamy 193

Analysis of voltammetric currents in concentrated organic redox solutions using the Cullinan–Vignes equation and activity-corrected mutual diffusion coefficients
S.R. Ragsdale and H.S. White 199

Origin of electrocatalysis in the reduction of peroxodisulfate on gold electrodes
Z. Samec, A.M. Bittner and K. Doblhofer 205

Infrared reflectance spectroscopy of the copper|aqueous borax interface in the presence of thiourea and cyanothioacetamide
S.N. Port, S. Ceré and D.J. Schiffrin 215

Solving the interference due to coupled reactions in the polarographic determination of benzaldehyde with soft modelling
A. Herrero and M. Cruz Ortiz 223

Determination of the complexation capacity. Electrochemical lability in the absence of excess of ligand
M.J. Rodriguez Presa, J.A. Catoggio, D. Posadas and R.I. Tucceri 229

Electrocatalytic oxidation of D-sorbitol on platinum in acid medium: analysis of the reaction products
L. Proença, M.I.S. Lopes, I. Fonseca, K.B. Kokoh, J.-M. Léger and C. Lamy 237

Voltammetry of metal ions in mixtures of ligands. Part II: Application to successive labile complexes
F. Berbel, J.M. Díaz-Cruz, C. Ariño and M. Esteban 243

Author Index 253

Subject Index 255

The table of contents of the Journal of Electroanalytical Chemistry is included in ESTOC – Elsevier Science Tables of Contents services – which can be accessed on the World Wide Web at the following URLs:
http://www.elsevier.nl/locate/estoc or http://www.elsevier.com/locate/estoc

US mailing notice—*The journal of Electroanalytical Chemistry* (ISSN 0022-0728) is published three weekly by Elsevier Science S.A. (P.O. Box 564, CH-1001 Lausanne). Annual subscription price in the USA is US$ 5069.00 (valid in North, Central and South America), including air speed delivery. Application to mail at second class postage rate is pending at Jamaica, NY 11431.
USA POSTMASTERS: Send address changes to the *Journal of Electroanalytical Chemistry*. Publications Expediting, Inc., 200 Meacham Avenue, Elmont, NY 11003.
AIRFREIGHT AND MAILING in the USA by Publication Expediting, Inc., 200 Meacham Avenue, Elmont, NY 11003.
Advertising information: Advertising orders and enquiries may be sent to: **International:** Elsevier Science, Advertising Department, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK, Tel: +44 1865 843565; fax: +44 1865 843976. **USA and Canada:** Weston Media Associates, Daniel Lipner, P.O. Box 1110, Greens Farms, CT 06436-1110, USA, Tel: +1 203 261 2500; fax: +1 203 261 0101. **Japan:** Elsevier Science Japan, Marketing Services, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106, Japan, Tel: +81 3 5561 5033, fax: +81 3 5561 5047.